



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

646.2910

Job Sheet 196015-B



Part No: 646.2910

Job Qty: 1 pcs

Part Name: Deflector



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 7/30/19

Job Tracking No:

Due Date: 6/28/19

Created By: Linda Lacelle

Type: Stock

Description:

Note: DWG 646.2900 REV:N/C IPP REV A 18.05.01 RQ VERIFIED BY DD

Ship Via:

Bill of Materials



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S201606



Part: 646.2910

Job No: 196015-B

Serial No/Batch: S195161

Revision: N/C

Inspector:

Exp Date:

Instructions: Various STC's

Date: 07/30/19

SCRAP P.T.O.

Job BOM					
Job BOM records could not be found.					
Job Allocations					
Job Allocations could not be found.					

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Deflector	0.360inches ± 0.010	0.370 0.350		
2	Deflector	1.320inches ± 0.010	1.330 1.310		
3	Deflector	3.300inches ± 0.010	3.310 3.290		
4	Deflector	3.000inches ± 0.010	3.010 2.990		
5	Deflector	0.360inches ± 0.010	0.370 0.350		
6	Deflector	190.000inches ± 0.010	190.010 189.990	Radius	
7	Deflector	0.090inches ± 0.010	0.100 0.080	Radius	
8	Deflector	1.000inches ± 0.010	1.010 0.990		
9	Deflector	42.380inches ± 0.010	42.390 42.370		
10	Deflector	20.000Degrees ± 0.010	20.010 19.990	Angle	

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Tel (613) 632-5200
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646.2910
Job Sheet 196015



Part No: 646.2910

Part Name: Deflector

Job Qty: 16 pcs

15 A1



Part Weight: 0 lbs

Job Created: 6/4/19

Due Date: 6/28/19

Type: Stock

Status: New

Priority: Medium

Job Tracking No:

Created By: Marie Lajeunesse

Description:

Note: DWG 646.2900 REV:N/C IPP REV A 18.05.01 RQ VERIFIED BY DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Bandsaw - 1	16 pcs	6/28/19	6/28/19	0.00	0.03	Bandsaw - 1		DTP 19-07-02
110	HAAS 4 Axis - B4B	16 pcs	6/28/19	6/28/19	0.15	10.67	HAAS - 1 - B4B		DTP 19-07-02
							HAAS - 2 - B4B		
							HAAS - 3 - B4B		
							HAAS - 4 - B4B		
120	QC 2	16 pcs	6/28/19	6/28/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		



Container No: S195161



Part: 646.2910

Job No: 196015

Serial No/Batch: S195161

Revision: N/C

Inspector:

Exp Date:

Instructions: Various STC's

Date: 07/02/19

DART Aerospace Ltd.
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130 QC 8	16 pcs	6/28/19	0.00	0.00	QC 2 - 63	
					QC 2 - 8	
					QC 2 - 66	
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	027 19-07-02
					QC 8 - 12	
					QC 8 - 14	4m 19/07/11
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
140 Outsource - 4 - Anodize	16 pcs	6/28/19			QC 8 - 1 (A)	
					QC 8 - 47	
150 Packaging 2-1 - Receive - B4B	16 pcs	6/28/19	0.00	0.00	QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
					ATG001-VC	8
					Packaging 2 - 1 - B4B	12 2019-07-15
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	

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					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 27 - B4B	
					Packaging 2 - 28 - B4B	
					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
155 QC 6	16 pcs 1592	6/28/19	0.00	0.00	QC 6 - 9	
					QC 6 - 68	DAS
					QC 6 - 61	61
					QC 6 - 40	9-88
180 Packaging 3-1 - Stock - B4B	16 pcs 15	6/28/19	0.00	0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 -	

				B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
190 QC 21 - SA	16 pcs	6/28/19	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 53	

Part Op 100 - (Bandsaw) 42.600" long
Descriptions: 110 - (HAAS CNC Vertical Machine)
120 - (QC2- Inspect parts off machine FAI/FAIB)
130 - (QC8- Inspect parts - second check)
140 - (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG : 44008 Hard Anodize, Color Black / Prime As per Dwg 646.2900 Rev. N/C
150 - (Receive & Inspect for Damage & Mat'l Certs)
155 - (QC6- All purchased or subcontracted products)
180 - (Identify as per dwg & Stock Location: _____) ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***
190 - (QC21- Final Inspection - Work Order Release)

Job BOM				
Part / Item	Component Name	Quantity	Operation	Container
646.2900E	Deflector	57.6000 ft (5.6 ea) 3.966	100-Bandsaw - 1	5068305

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-Bandsaw - 1	646.2900E	58	875	0

MAT
used
~~5068305~~
63.456

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Deflector	0.360inches $\pm$ 0.010	0.370 0.350	0.358	
2	Deflector	1.320inches $\pm$ 0.010	1.330 1.310	1.316	
3	Deflector	3.300inches $\pm$ 0.010	3.310 3.290	3.298	
4	Deflector	3.000inches $\pm$ 0.010	3.010 2.990	3.000	
5	Deflector	0.360inches $\pm$ 0.010	0.370 0.350	0.358	
6	Deflector	190.000inches $\pm$ 0.010	190.010 189.990	0.190	Radius
7	Deflector	0.090inches $\pm$ 0.010	0.100 0.080	0.090	Radius
8	Deflector	1.000inches $\pm$ 0.010	1.010 0.990	0.996	
9	Deflector	42.380inches $\pm$ 0.010	42.390 42.370	42.375	
10	Deflector	20.000Degrees $\pm$ 0.010	20.010 19.990	20°	Angle

DAS
73
9-89
19-06-30

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Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐	
Date :	Sequence #:	QTY Affected :		MRB (QS1042)	
Description Work Order Deviation		Disposition			
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details: _____ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐			



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER POHB044008



Supplier: ATG001-VC
A.T.G. Industries Inc
731 INDUSTRIELLE ROAD
ROCKLAND
ON
K4K 1T2 Canada
Phone: 613-446-4544
Fax: 613-446-4556

Attention: Lalande, Marc-Andre

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB044008
PO Date: 7/15/19
Due Date: 7/19/19
**Purchase Order
Revision:**
Revision Date:
Ship-To Contact: Phone:

Via: Ground
Pymt Terms: Net 30

Freight Terms:

Special Comments: ***RUSH***

E-MAILED
2019-07-19

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	196015	646.2910	Deflector : Various STC's (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG : Hard Anodize, Color Black / Prime As per Dwg 646.2900 Rev. N/C	Firmed	-	7/19/19	16 pcs	0 pcs	16 pcs	\$53.77/pcs	\$860.32
					16 X	JUL 24 2019				DAS 61 9-89	
2	196673	D5500-1	Body, Upper Cutter Issue P/O to ATG: HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2 PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N ***1-2 MIL MAX AS PER QSI005*** Certification of Conformity is required	Firmed	-	7/19/19	3 pcs	0 pcs	3 pcs	\$26.52/pcs	\$79.56
					X3	JUL 19 2019				DP	
						S197495					
3	196674	D5501-1	Body, Lower Cutter, Long Issue P/O to ATG: HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2 PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N ***1-2 MIL MAX AS PER QSI005*** Certification of Conformity is required	Firmed	-	7/19/19	2 pcs	0 pcs	2 pcs	\$26.52/pcs	\$53.04
					X2	JUL 19 2019				DP	
						S197499					



Dart Aerospace Ltd.
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Canada

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PURCHASE ORDER POHB044008



Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4	196675	D5505-1	Base, Upper Cutter Outsource process-Anodize per QSI017 4.1.10.1 - Issue P/O to ATG: HARD ANODIZE COLOR BLACK, PER IAW MIL-A- 8625 TYPE 3 CLASS 2 PRIME AS PER IAW MIL-P- 23377J TYPE 1 CLASS N ***1-2 MIL MAX AS PER QSI005*** Certification of Conformity is required	Firmed	-	7/19/19	3 pcs	0 pcs	3 pcs	\$24.62/pcs	\$73.86
				X3			JUL 19 2019				DP
							5197502				
5	196676	D5506-3	Base, Lower Cutter, Long Issue P/O to ATG: HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2 PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N ***1-2 MIL MAX AS PER QSI005*** Certification of Conformity is required	Firmed	-	7/19/19	2 pcs	0 pcs	2 pcs	\$24.62/pcs	\$49.24
				X2			5197504				DP

Grand Total: \$1,116.02

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material Identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit
www.dartaerospace.com for further explanation.

Plex 7/19/19 8:32 AM Dart.Guerin.Kimberley



A.T.G. Industries Inc.
760 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 918262

Date: 23-Jul-19

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Patrick Lussier
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		ATG Delivery	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
16 ea	Part: 646.2910 Rev: N/C Deflector Hard Black Anodize per MIL-A-8625F, Type III, Class2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 25475 Line: 1 PO: POHB044008		
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: JUL 23 2019 Certified Signature: Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			

RECEIVED
JUL 23 2019
DART AEROSPACE LTD.

Made in Canada.

Entered:

Date:

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No.

Route update only

Job: <u>1907.2016 196015</u>		DISPOSITION		DEPARTMENT/PROCESS											
Part No. <u>646.2016</u>		Rework ☐ Scrap ☒ Use-as-is ☐		Skid-tube Machining ☐ Large Fab ☐		Cross tube ☐ Small Fab ☐ Finishing ☐		Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐		Engineering ☐ Water Jet ☐ Supplier ☒ Quality ☐					
Date: <u>1907/30</u>	Sequence #: <u>140</u>	QTY Affected: <u>1 of 16</u>		MRB (QS1042) <u>1N3P</u> <u>12 of 19/7/30</u>											
Description Work Order Deviation				Disposition											
<u>Gauge on bottom of deflector</u>				<u>Blind wt gauge gauge</u> <u>repair not lost efficient, sent 19/7/30</u>											
Root Cause				Completed by <u>DAS 61</u> Lead hand / Supervisor											
Operator ☒ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☒				QC / QA Coordinator <u>DAS 68</u> <u>9-89</u> <u>JUL 31 2019</u>											
FAULT CATEGORY															
Pressure/Forced ☒ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details:				Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐				Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐				Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☒ Part Lost/Missing ☐ Misread ☐			